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[54] **MOBILE BOILER HOUSE**

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[73] Assignee: **Intercity Electric & Mechanical Services Ltd.**, England

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[30] **Foreign Application Priority Data**

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[51] **Int. Cl.**[2] **F24D 3/10; F27B 37/36**

[52] **U.S. Cl.** ..... **237/8 D;** 52/67; 52/71; 220/4 F; 296/26; 122/494

[58] **Field of Search** ..... 237/8 D, 9 R, 58, 59; 52/67, 71; 220/8, 4 F; 296/26; 122/494

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[57] **ABSTRACT**

The invention relates to a housing suitable for containing a boiler with its associated water tank and it consists of an upper part which for storage and transport can be telescoped over the lower part and when required for use can be raised to form an upper extension of the lower part and fixed in position. The lower part preferably carries pivoted flaps adapted to form an extension of the plan size of the lower part greater than the plan size of the upper part but which can be folded to enable the upper part to be telescoped down over the lower part.

3 Claims, 9 Drawing Figures

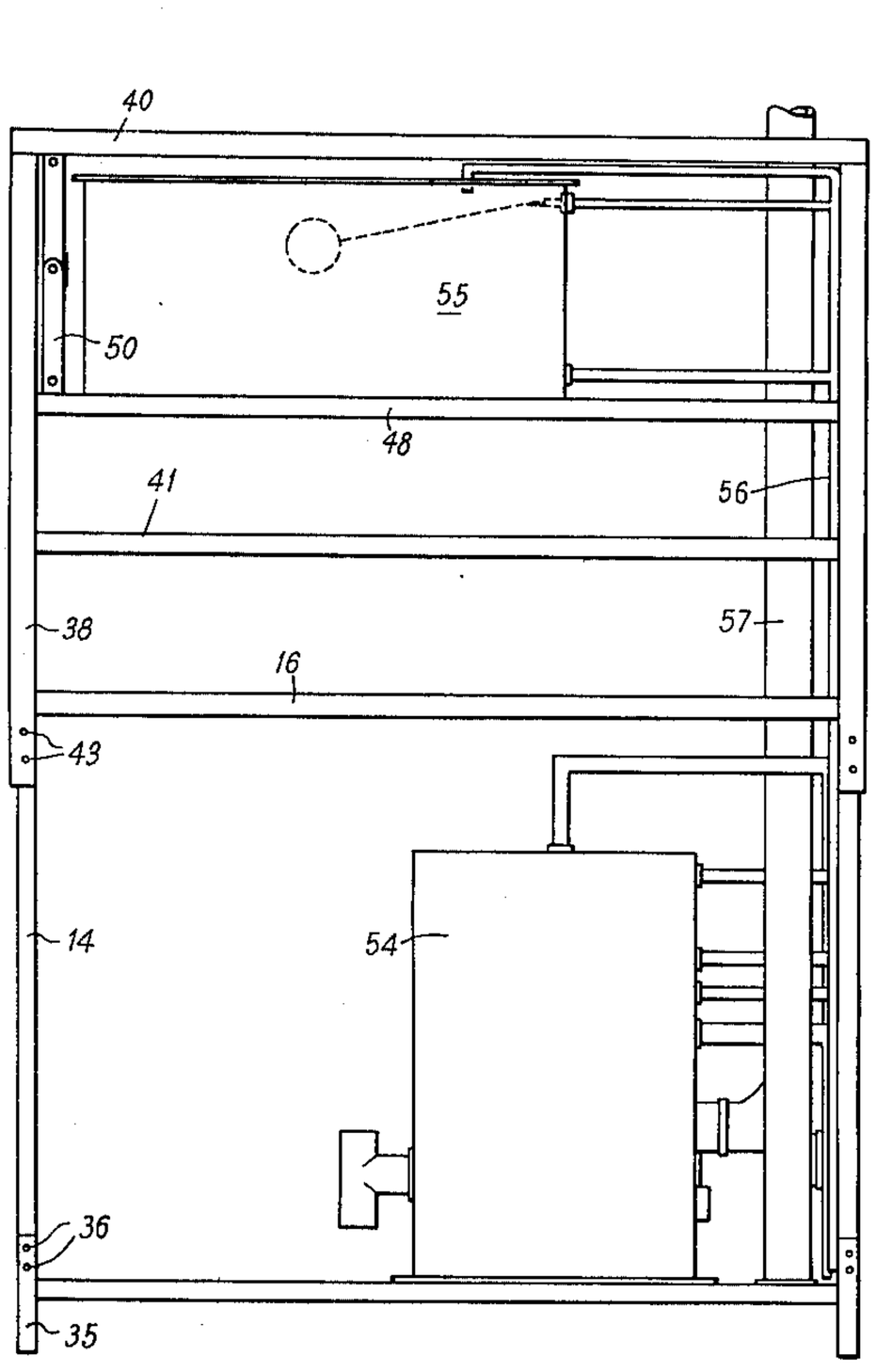


FIG. 1

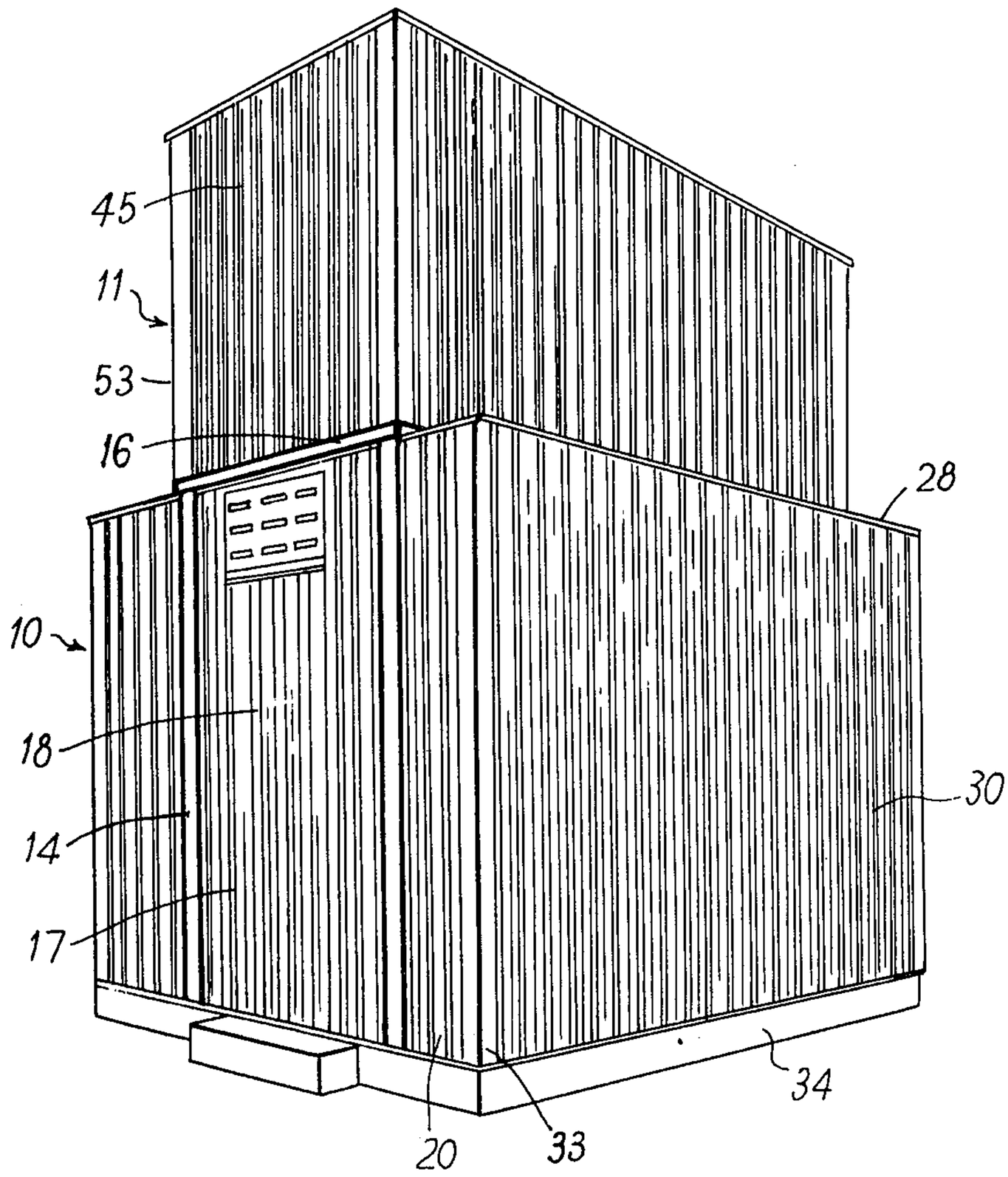
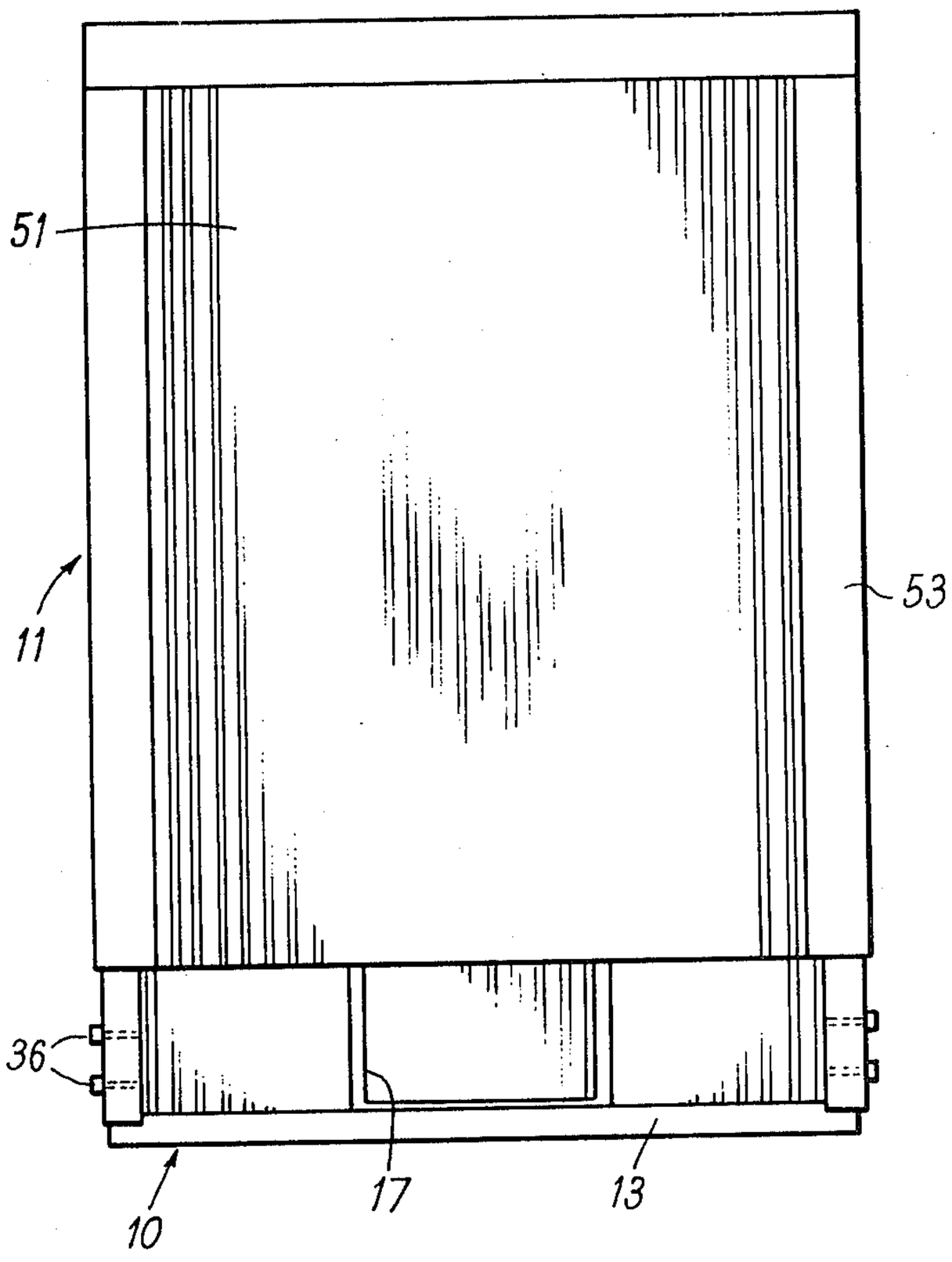


FIG. 2



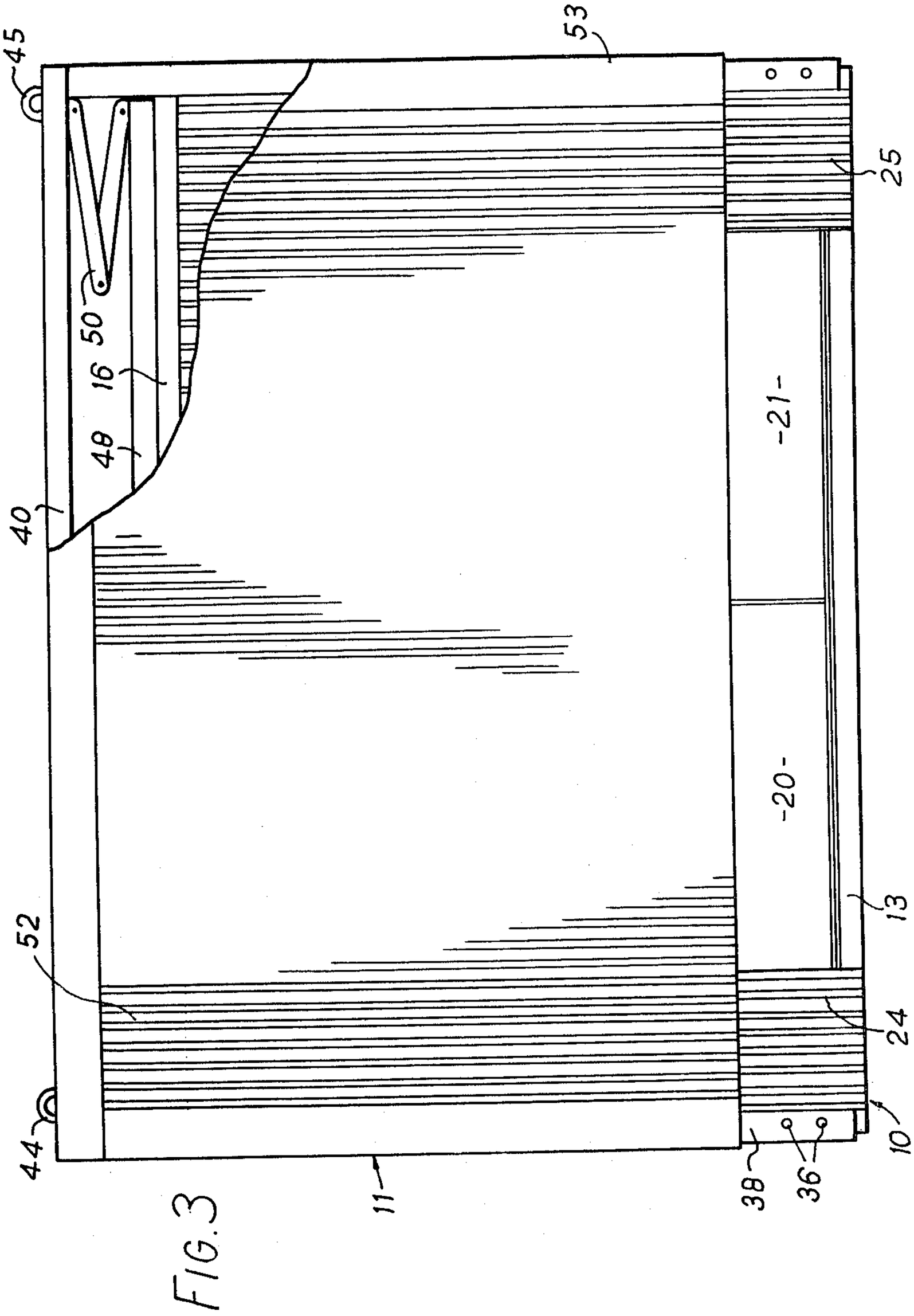
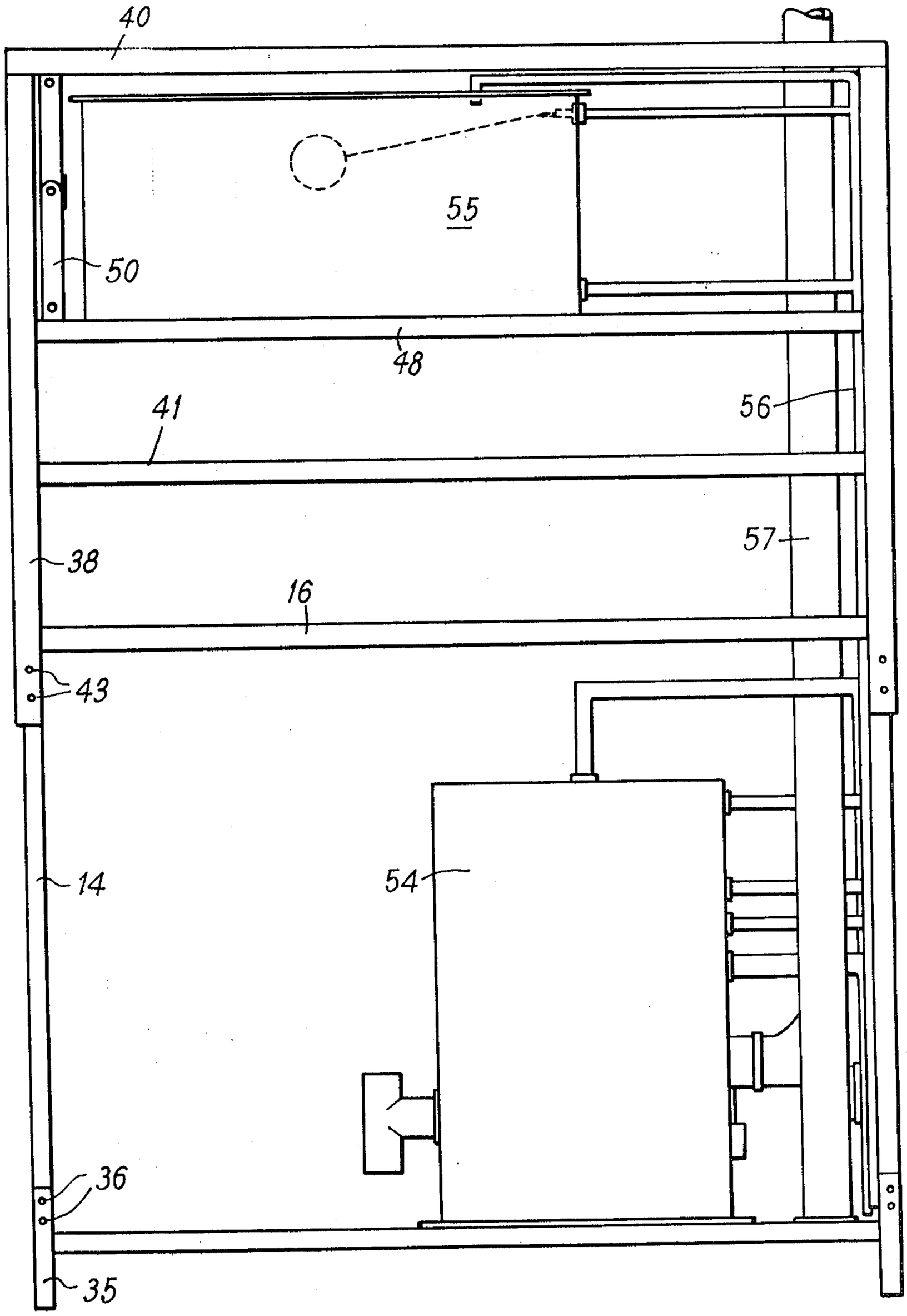


FIG. 3

FIG. 4



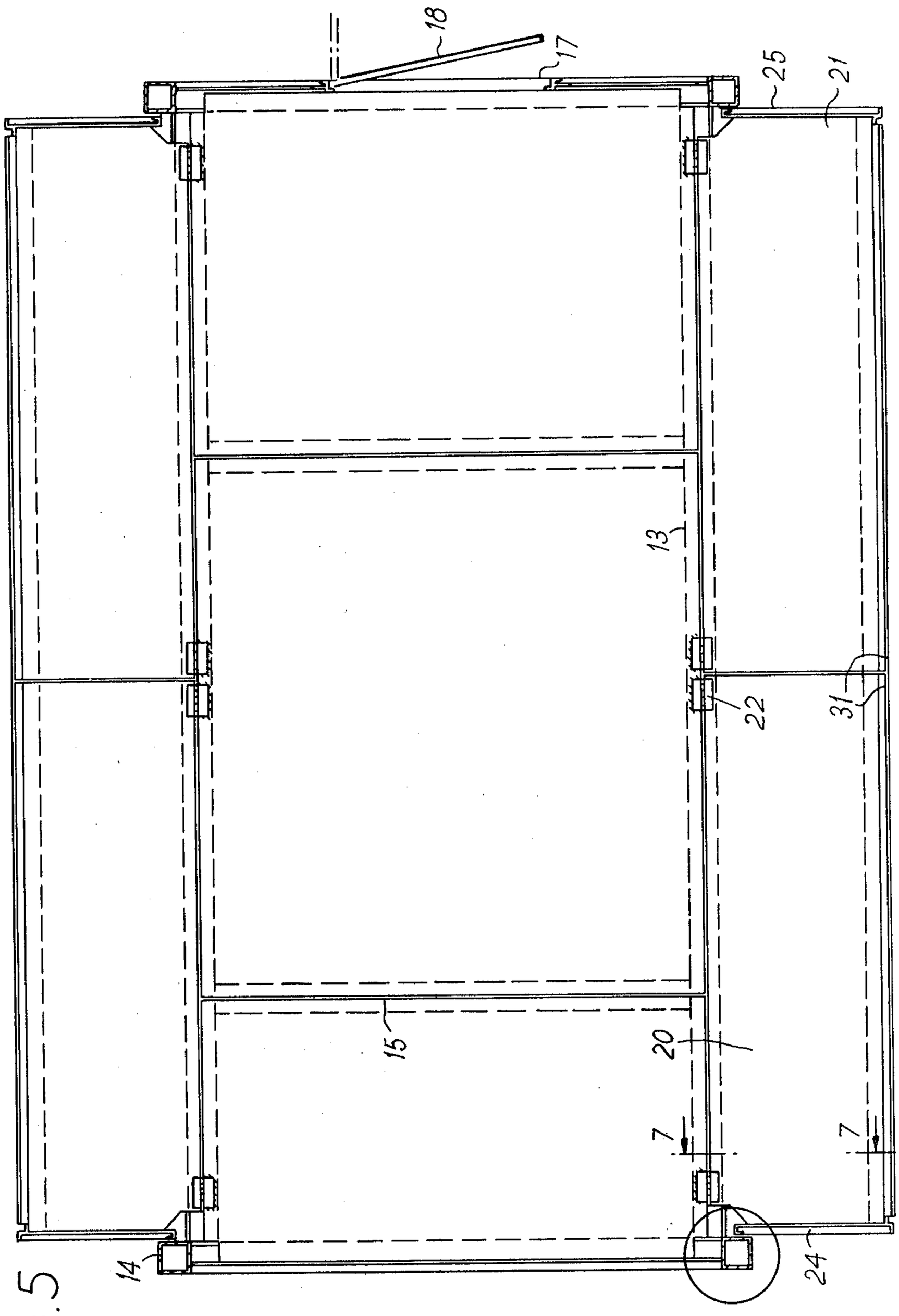


FIG. 5

FIG. 6

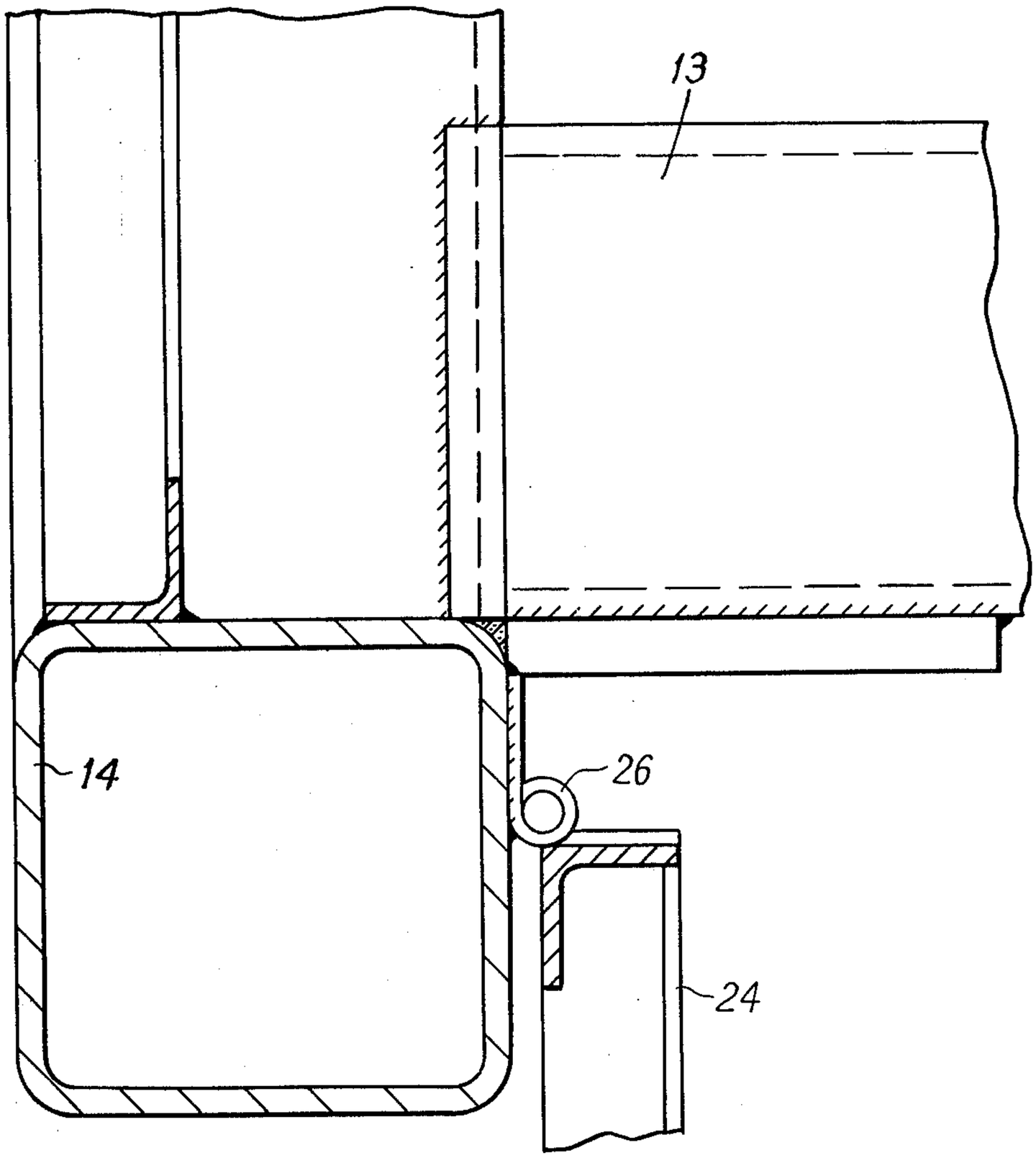
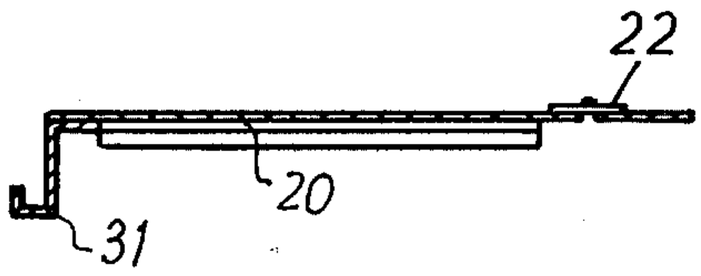


FIG. 7



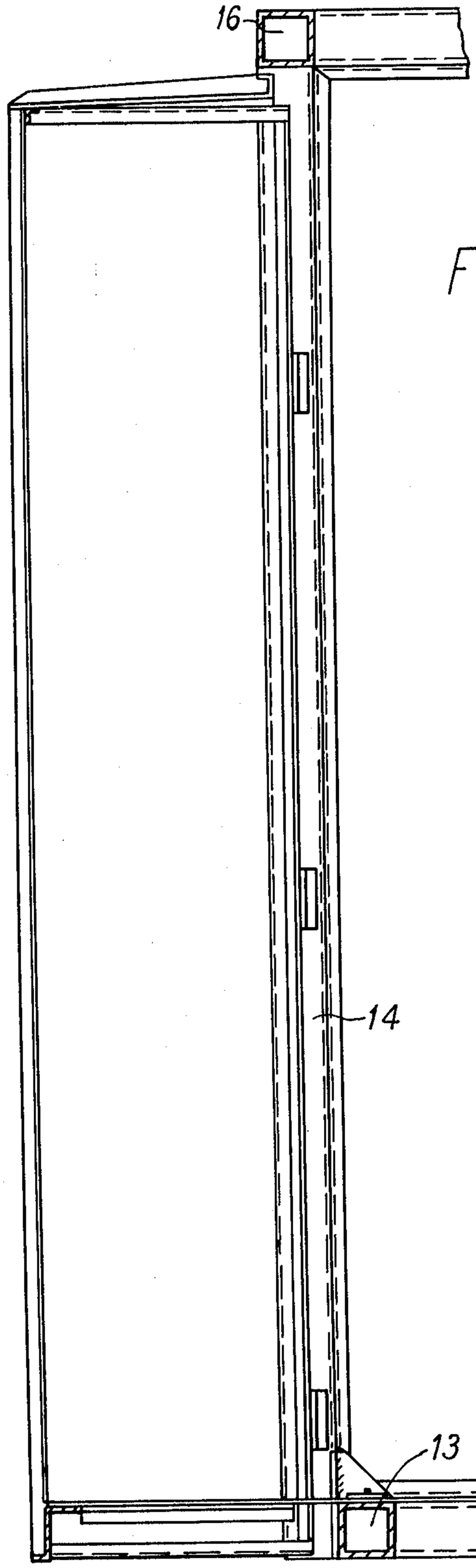
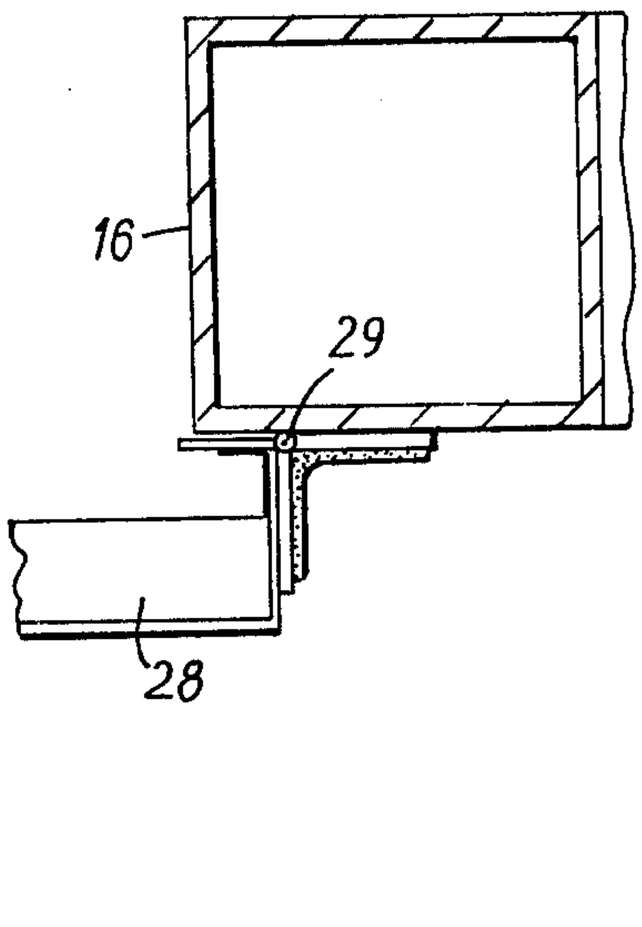


FIG. 8

FIG. 9



MOBILE BOILER HOUSE

This invention relates to transportable housings suitable for housing heating installations of the kind sometimes known as a mobile boiler house which consists of an oil or gas burner with ancillary pumps and controls which can be despatched to a building site as a unit more or less ready for use as soon as it is connected to the building site piping.

The main object of the invention is to provide a housing which can contain not only the boiler with its ancillary parts but also the necessary tanks (e.g. hot and cold water tanks) and which housing is convenient for transport.

According to the invention the housing is made in two box-like parts the lower part being adapted to contain a boiler and including a floor frame to carry the boiler, and at least some walls mounted on the floor frame, and an upper part adapted to contain a watertank for the boiler and having walls which can contain the lower part during storage and transport but which can be lifted to a position in which its lower edges are about level with the top edges of the lower part, means being provided for fixing the two parts together in that condition, said upper part having at least one removable wall member for insertion of the tank.

The lower part preferably has pivoted extension flaps which can be closed for transport so that the lower part including the flaps has a plan area just within that of the upper part and when the upper part is raised on site, the pivoted flaps can be opened out and additional panels fitted if required to complete the box-like construction.

The lower part may have a permanently fitted door.

The invention will now be further described, by way of example, with reference to the accompanying diagrammatic drawings wherein:

FIG. **1** is a perspective view of a housing made in accordance with the invention in erected condition intended as a boiler housing;

FIG. **2** is a front view in collapsed transportable condition;

FIG. **3** is a side elevation in collapsed condition;

FIG. **4** is a side elevation of the framework in erected condition;

FIG. **5** is a plan view of the floor with floor and wall extension flaps;

FIG. **6** is a detail on an enlarged scale of the part in the circle **6** on FIG. **5**;

FIG. **7** is a section on the plane **7—7** on FIG. **5** through a floor extension flap;

FIG. **8** is a vertical section showing a side flap; and

FIG. **9** is an end view of a flap **28** with a section of the frame **16** to which it is pivotally attached.

The housing consists of a lower part **10** to contain a boiler and an upper part **11** to contain a water tank to supply water to the boiler. The housing has a length greater than its width.

The lower part has a strong steel base or floor frame consisting of a rectangle of angle or box sections **13** and cross-beams **15** (FIG. **5**) welded to four box-section corner uprights **14**. The upper ends of the uprights **14** are connected by a rectangular frame **16**. One end of the lower part has a door frame **17** receiving a door **18**.

Pivoted to each long side of the lower part are five flaps to form extensions of the lower part. Thus, two floor flaps **20, 21** are pivoted by hinges **22** to the floor frame **13**, end vertical flaps **24, 25** are pivoted by hinges

26 (FIGS. **6** and **8**) to the uprights **14**, and a roof flap **28** is pivoted to the frame **16** by hinges **29** (FIG. **9**). FIG. **9** is an end view of a flap **28** with a section of the frame **16** to which it is pivotally attached. When these flaps are opened out they form side extensions of the lower part **10** and are completed by loose side walls **30** (FIG. **1**) which fit into channels **31** (FIGS. **5** and **7**) attached to the outer edges of the flaps **20, 21**. The roof flaps may carry channels similar to **31** to receive the upper edges of the walls **30**. The walls **30** can be placed inside the floor and roof flaps for storage and transport.

When the flaps are closed they are located with the plan area of the lower part **10** i.e. within the area marked out by the uprights **14**.

The corners of the extensions are covered by upright angle irons **33** (FIG. **1**) which are attached by spring clips or screws.

The lower part **10** seats on a concrete base **34** (FIG. **1**) to which it may be anchored by strips **35** (FIG. **4**) attached to the uprights **14** by bolts **36**. The concrete base is not part of the transportable housing but is provided on site.

The upper part **11** of the housing consists of upright corner angle irons **38** connected together by various transverse members such as **40, 41** (FIG. **4**) to form a box-like frame of such plan area that the angle irons can slide on and are guided by the outer surfaces of the uprights **14**. Thus when the housing is collapsed for transport the upper part **11** encases nearly the whole of the lower part **10** and is fixed in lowered position by the bolts **36** as shown in FIGS. **2** and **3**.

When the upper part is raised it is fixed in raised position by bolts **43** using the same bolts in the uprights **38**.

When the upper part is raised its lower edges are about level with the top edges of the upper part.

The upper frame members **40** have lifting lugs **44, 45** attached to them.

The upper part **11** has a removable panel **45** for insertion of a water tank.

Inside the upper part is a horizontal frame **48** adapted to carry the water tank. This frame **48** is vertically movable to permit the upper part **11** to be collapsed down over the lower part **10**. For this purpose the frame **48** is carried by four sets of linkage **50** the upper link of which is pivoted to the upper frame **40** and the lower link of which is pivoted to the frame **48**.

All the frames are covered by corrugated metal sheets as **50** (FIG. **2**) and **52** (FIG. **3**) or other suitable sheet material. The covering may include corner angles for the upper part **11** such as **53**.

When the housing is erected the boiler **54** (FIG. **4**) is installed in the lower part **10** and the water tank **55** is installed in the upper part on the frame **48**. All necessary piping **56** between the parts **10, 11** are arranged against the rear wall and a flue pipe **57** is provided nearby.

Suitable rubber packing or other water proofing may be provided at the hinges of the extension flaps or elsewhere as required.

I claim:

1. A water boiler and housing therefor comprising a lower housing part and an upper housing part, said lower housing part comprising a floor, corner uprights fixed to the floor, said upper housing part including upright corner angle irons which slide on and are guided by said corner uprights, horizontal side frame members connecting the adjacent corner uprights together at their upper ends, flaps pivoted to the floor,

uprights and horizontal frame members adapted to be folded along the sides of the housing and to be opened out to form housing extensions on each side; said boiler being stationary supported by said floor within the lower housing part; said upper housing part including a roof and front, back and side walls adapted to slide telescopically and vertically over the lower housing part when said flaps are folded in, one of said walls having at least a part thereof removable for access, means for fixing the upper housing part to the lower housing part above the floor mounted flaps when said floor mounted flaps are in open extended positions, a horizontal support within the upper housing part adapted to support a water tank, vertically collapsible means connecting said support to the roof of the upper housing part whereby said support is near the roof when the upper housing part is collapsed over the lower housing part and is spaced further apart from the roof

when the upper housing part is raised so as to provide a space between the roof and support to receive the water tank at the upper part of the upper housing part.

2. A water boiler and housing as claimed in claim **1** wherein said flaps on each side of said lower housing part consist of two floor flaps pivoted on a horizontal axis to the floor of the lower housing part, two side flaps pivoted on vertical axes to the front and rear uprights, a roof flap pivoted on a horizontal axis to horizontal side frame members of the upper housing part, loose side walls also being provided, said floor flaps having channels adapted to receive the bottom edges of said loose side walls.

3. A water boiler and housing as claimed in claim **1** wherein said vertically collapsible means consist of four sets of pivoted links at the corners of the upper housing part.

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